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ABSTRACT

The report presents summaries of presentations given at a December 1986 University Forum in which leaders from government, higher education, and the private sector examined trends behind the current decline in the rural economy and identified areas offering potential for revitalization. An introductory paper by William H. Gray is titled, "America's Rural Economy under Stress: Challenges for Continuing Higher Education." Ten presentations address responses to rural needs: "Developing Rural Communities" (Robert Beech); "Training Local Leaders" (Douglas McAllister); "Implications for Higher Education" (Steve Gunderson); "Reaching Rural Communities" (J. O. Grantham); "Upgrading Rural Education" (John Duffy); "Providing State Support" (John Crothers); "Defining Higher Education's Response to Rural Needs" (Judi Hackett); "Adapting to Changing Needs" (Allan Ostar); "Diverse Responses" (Morton Weir); and "Meeting International Challenges" (Raymond Miller). Douglas Treadway discusses "The Global Economy and Rural America: Implications for Higher and Continuing Education," and Frederick Humphries examines "The Academic/Rural Split: How It Happened and Why It Should Change." Model rural development programs are then described in six brief summaries, including: "The Missouri Product Finder"; The University of Minnesota-Morris Small Business Cooperation Office"; and "The Kansas State University Science Honors Program." (SM)

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CHALLENGES

For Continuing Higher Education Leadership

THE TRANSFORMATION OF RURAL AMERICA

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CHALLENGES

For Continuing Higher Education Leadership

THE TRANSFORMATION OF RURAL AMERICA

A Note of Appreciation

The CHEL Project extends its appreciation to the many individuals from the southern region who contributed to the recent CHEL University Forum. In particular, the Project is grateful for the efforts of Phyllis Jonas, formerly of the University of Charleston and currently associate dean of the College of Lifelong Learning at Wayne State University; John Duffy, system vice president, University Campuses and Continuing Education at the University of South Carolina; and the University of South Carolina continuing education staff for their assistance in planning and organizing the forum participants' stay in Charleston.

The Project also acknowledges those individuals whose efforts contributed to the preparation of this publication: Project associate Carol Gasparach, who spent many hours ensuring the smooth functioning of both the Forum and the production of the *Challenges* brochure; Jean Preer, journalist and educator, whose reporting work at the Forum formed the basis for this document; Wendy Sibelman, NUCEA director of publications and marketing, who played a major role in the production of this publication; NUCEA staff reporter George Faux, who was responsible for the brochure's "Model Programs" section; and Kate Lowman, who provided final editing assistance.

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Challenges for Continuing Higher Education Leadership
The Transformation of Rural America

The NUCEA Continuing Higher Education Leadership Project

Continuing higher education has historically been in the forefront of higher education's efforts to respond to the nation's changing educational needs. Recognizing that such response requires forceful and effective continuing higher education leadership, the National University Continuing Education Association (NUCEA) in 1984 launched a five-year project to identify significant policy issues affecting the field and to develop responsive leadership within and for continuing education. The NUCEA Continuing Higher Education Leadership Project (CHEL) is funded by the W.K. Kellogg Foundation, and is directed by a national commission including representatives from government, industry, and higher education.

The University Forum

The University Forum represents one of the CHEL Project's efforts to identify and explore the significant issues facing society. Through the Fora, leaders from continuing higher education, business, public affairs, and higher education come together to discuss and debate these issues. What emerges is not only a greater understanding of the issues, but also ideas for programs responding to the issues and needs identified at the Fora.

The first University Forum was held at Thornwood, New York, and yielded the report, *Challenges for Continuing Higher Education Leadership: Corporate/Campus Collaboration.*

The Transformation of Rural America

The transformation of rural America came to the public's attention through dramatic press reports of the crises facing the small, family owned farm... or a time, farm foreclosures and the disruption of the lives of America's family farmers were graphically portrayed on the evening news. These reports presented the results of major changes which have been taking place in rural America. While urban America was recovering from the recession of the early 1980s, rural America continued to experience a recession not only in agriculture, but also in key rural industries such as mining, fishing, forestry, and energy. And when the press coverage stopped, awareness of these problems receded from the nation's consciousness.

International competition has affected the entire American economy, but rural economies, generally dependent on a single industry, are often the hardest hit. The shift to a service economy has been well documented, but as William Gray points out, "Service jobs are generally less important to the rural economy than to the urban economy."

The goal of this Forum was not only to foster a greater understanding of the rural dilemma, but also to suggest how continuing higher education, working with the public and private sectors, can contribute to the transformation of rural America. As this report indicates, continuing higher education is responding to the rural crisis with a wide range of programs, from North Dakota State University's program for farm wives to programs for state and local officials offered by the University of Kansas and Virginia Polytechnic Institute. The University of Minnesota-Morris is working with small businesses and is participating in a McKnight Foundation initiative to enable local communities to take charge of their futures. Many institutions, such as the Kansas State University and the University of Oklahoma, are developing creative distance learning programs for rural residents.

Judi Hackett, director of the Center for Agriculture and Rural Development of the Council of State Governments, challenged higher education "to review the service mission of your institutions as it relates to rural America and to do everything you can to emphasize its importance and raise its visibility within the state government community." The ultimate challenge to continuing higher education is to provide rural residents and rural communities with the education and tools they need to take control of their own destiny.

James B. Hirsh, Director
NUCEA Continuing Higher
Education Leadership Project

Rural America in Transition: Challenges for Continuing Higher Education

Changes in the global economy, shifts in our domestic production of goods and services, and advances in telecommunications and information systems represent major challenges to every segment of American society. But for residents of rural America and for the educators who serve them, these changes demand particular consideration and action. Responding to this need, the Continuing Higher Education Leadership Project convened a University Forum in Charleston, South Carolina, on December 4, 1986 to address the concerns of rural America in a time of transition.

Sponsored by the National University Continuing Education Association and the Kellogg Foundation, the CHEL Project focuses on issues in which continuing educators may apply their experience and expertise. Speakers from government, higher education, and the private sector described trends behind the current decline in the rural economy and noted those areas which offer potential for revitalization.

In panel discussions and small groups, participants from every area of the country identified the problems they have in common. At the same time, they stressed the need for each community to define its priorities and to generate activities suited to its own local and regional setting.

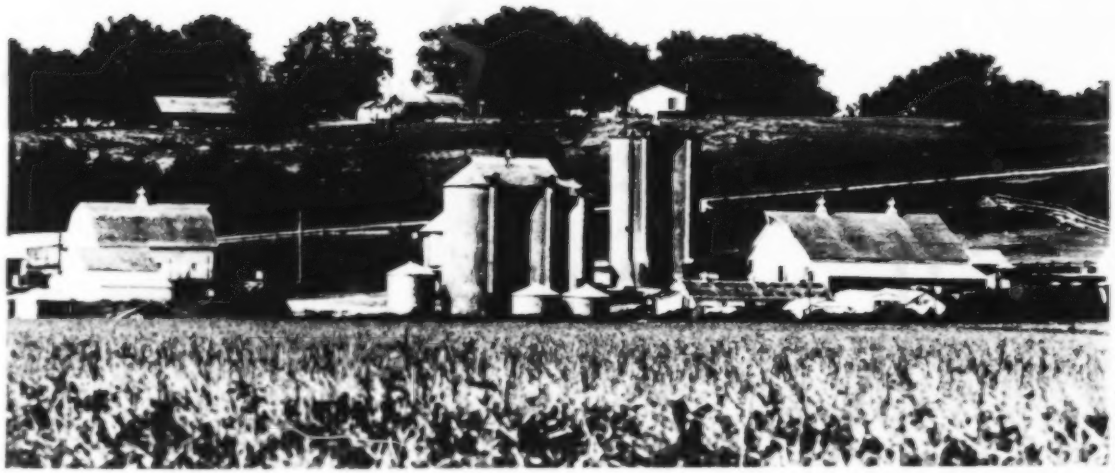


PHOTO: *Successful Farming Magazine*

The Forum dealt not only with the problems confronting rural America, but also with the role continuing higher education might play in meeting those challenges. By highlighting programs currently in place and by fostering contact between educators and policy-makers already involved in the concerns of rural America, the Forum contributed to this effort.

America's Rural Economy Under Stress: Challenges For Continuing Higher Education

William H. Gray
Professor and Director of Community Service
Washington State University

A brisk wind blowing across rural America is bringing economic change. Rural lenders are experiencing a sharp increase in loan losses, and bank failures in rural communities are running at a post-Depression high. Small rural towns are finding their economic viability in question, and county governments are straining under an eroded tax base. In short, the rural economy is under pronounced stress that is accelerating the tempo of change.

Structural changes occurring in the international economy are having a marked impact on rural areas of the United States. In a recent edition of *Foreign Affairs*, Peter Drucker (1986) summarized changes taking place in the world economy.

The primary goods economy has become "uncoupled" from the industrial economy. The collapse of raw material and agricultural commodity prices, which began in 1977, has had little impact on the world industrial economy; the depressed state of the primary goods economy has not led to a depression in the industrial economy. Moreover, production of forest products, metals, minerals, and agricultural products continues to increase despite the lower prices.

Production has come "uncoupled" from employment in the industrial economy. In industrial countries, manufacturing production has risen steadily and maintained its share of the total economy while at the same time employing fewer people. Countries that attempt to preserve blue collar manufacturing jobs at the expense of international competitiveness appear to be laying the foundation for increased unemployment in the future. The decline of jobs in manufacturing and resource-based industries is a function of the accelerated substitution of knowledge and capital for manual labor and the movement away from labor-intensive industries.

Capital movements rather than trade (in both goods and services) have become the driving force of the world economy. While world trade in goods and services is larger than ever before, capital movements, exchange transactions, and credit flows are now worth several times the value of world trade transactions. Any business currently exposed to the world economy must function as two businesses—a maker of goods (or a supplier of services) and a financial business.

Although rural economic change has been underway for a long time, the recent economic downturn is significant because it marks the first time in the past two decades that rural residents have not made real economic gains toward their urban counterparts. Urban residents have long had higher per capita incomes than rural residents, but until recently the gap was narrowing. Rural residents have found this economic slump difficult to tolerate following the rapid economic gains made by many rural residents, notably farmers, in the early 1970s.

William Gray

The Rural Income Gap

Per capita income differs substantially between rural and urban counties. Metropolitan counties of the United States had annual income levels approaching $14,000 per capita in 1984, approximately 35 percent higher than their rural counterparts. Non-metropolitan counties clustered

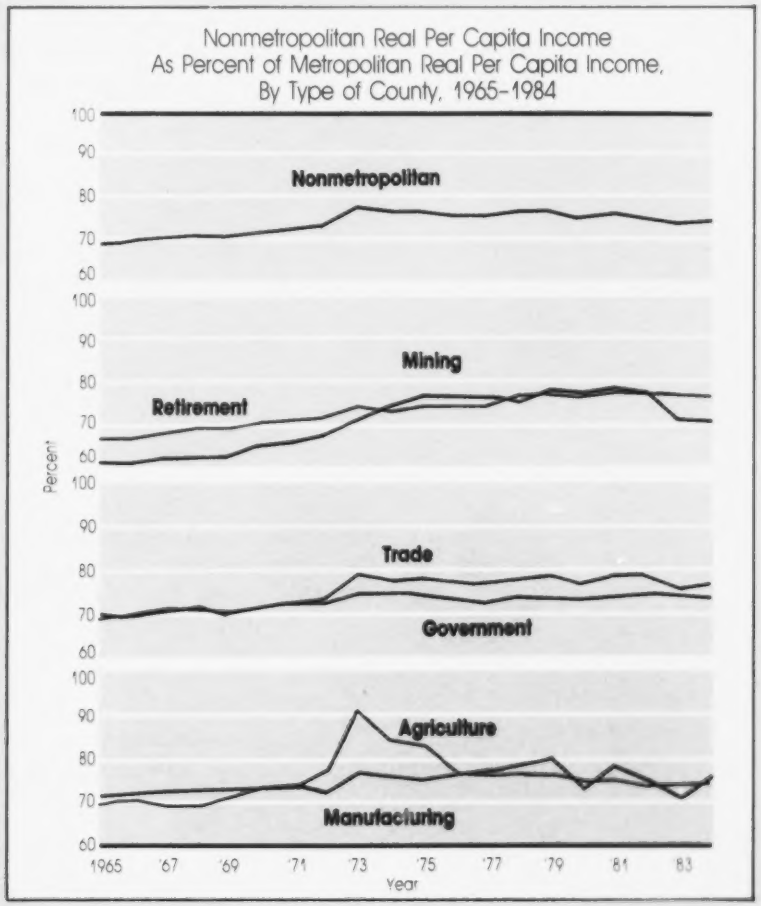
The graph, right, shows the real per capita income gap (expressed as the ratio of non-metropolitan per capita income to metropolitan per capita income) for the 1965-84 period. Two periods appear to have been particularly important over this 20-year span. First, the 1965-73 period revealed a narrowing of the gap nationally, with rural income rising as a percent of urban income from 60 percent in 1965 to 78 percent in 1973. The 1973-84 period showed non-metropolitan per capita incomes making no further progress toward metropolitan levels. The gap actually widened over the last five years, with the ratio of rural to urban income falling to 75 percent in 1984. In 1967 dollars, the gap rose from $885 in 1973 to $1,116 in 1984. (Henry, 1986)

Data collected for the national census show a nearly uninterrupted convergence in incomes among census regions since the onset of the Second World War. These regional comparisons, however, can mask disparities within states. Therefore, care must be taken not to equate the well-being of the states or regions with that of metropolitan areas.

In Washington state, for example, Russell Lidman found that per capita personal income in the Central Puget Sound Region, the most urbanized area in Washington, has been above that of any other region since data were first collected in 1929 (seven regions were created among the counties of Washington state for the purpose of this analysis). The ratio between the most and least prosperous regions was smallest in 1972. The aerospace decline, which hurt primarily the urban zone, contributed to this movement toward parity. The recovery of that industry and the growth in services and finance in Central Puget Sound, combined with declines in resource-based industries elsewhere, have produced the divergence. Per capita income in 1983 in the Central Puget Sound region had an index of 115 relative to the state average. The average in the remainder of the state was 90. This means that income in the Central Puget Sound region was 27 percent above that of the rest of the state.

One must ask whether the combined forces of income concentration in metropolitan areas and the decline of rural, resource-based economies are cyclical or structural. Are agriculture, mining, fishing, and forestry going to come back to their late 1970s' highs, or is the decline long term?

The influence of the business cycle can be examined by expressing the gap in real per capita income over the past 20 years in terms of an annual index, and then comparing movements in that index with annual changes in real Gross National Product (GNP). Using this technique, the Federal Reserve Bank of Kansas City concluded that the rural income gap does not seem to respond to business cycles, but represents a long-term structural issue.



around the $10,000 level. While rural per capita income made real gains in the 1965-73 period—relative to urban areas—that progress slowed and even reversed in the 1973-84 time frame.

A Changed U.S. Employment and Personal Income Picture

The reduced importance of goods-producing industries (agriculture, mining, construction, and manufacturing) as a source of employment has affected both rural and non-rural economies. For example, in 1920 more than two-thirds of U.S. workers, a large number of whom were farm owner-operators or hired labor, were involved in the production of goods. By the 1980s, well over two-thirds of the salaried and self-employed worked in service-producing industries such as transportation, public utilities, health care, and tourism. At the same time, the percentage of the workforce required to meet the country's needs for goods production has declined.

These changes in the nation's employment have been accompanied by significant shifts in personal income. The percentage of personal income generated from employment in the goods-producing sector has fallen, while that of the service sector has been relatively steady. In 1984, about one in four dollars of personal income came directly from goods-producing industries; nearly

"Rural economies normally depend upon one principal industry, and none of the traditional rural industries fared well in the 1980s."

half of the dollars came from the service-producing sector.

Sources of Our Rural Economic Problems

These factors—a challenging international economy and the shift to services—have combined with deregulation and agricultural change to create the rural economic problems of the 1980s.

International

The traditional rural economy industries of manufacturing, agriculture, energy, and forest products all have suffered as a result of increased foreign competition, the strong dollar, and weak world markets. While the same international factors have hurt the urban economy, the more diverse economies of metropolitan areas generally buffer some of these effects. Rural economies, on the other hand, normally depend upon one principal industry, and none of the traditional rural industries fared well in the 1980s.

Shift to Service

Most rural counties have been left behind in the nation's shift to a service-based economy. Service jobs constituted about 15 percent of total rural employment at the end of 1984, compared with 22 percent of total urban employment. Consequently, if the service sector of the economy continues to grow faster than other sectors, most rural counties will face slower employment growth than their urban counterparts.

Rural communities are largely ill-situated to benefit from the U.S. economy's shift to services. Recent studies done by William Beyers* indicate that the types of service employment that have increased most rapidly are business services, computer and data processing services, and temporary help services. Firms that provide these types of services prosper in metropolitan areas, where potential clients are concentrated, and are not likely to locate in rural areas, where clients are fewer and much more widely dispersed.

Deregulation

Deregulation has also adversely affected rural communities. It appears to have forced businesses in many rural areas to pay higher interest rates and, in some cases, higher transportation rates than in the 1970s, when both the banking and transportation industries were regulated.

* William Beyers, et al., *The Service Economy: Understanding Growth of Producer Services in the Central Puget Sound Region* (Seattle, WA: Central Puget Sound Economic Development District, 1984).

Agricultural Change

Increasingly, U.S. agriculture is dominated by a large number of small, part-time farms that earn most of their family income off the farm, and by a relatively small number of very large farms that produce most of the nation's food and fiber. The farms in between, corresponding most closely to the traditional "family farm," are those on the decline. Since many rural communities have built their local economy around servicing a large number of medium-sized farms, it is not surprising that these communities are experiencing economic problems.

Influence of the Information Age

In the late 1950s, jobs in the information sector, including the creation and transmission of information, became the principal sector of the U.S. labor force and the principal source of economic output.

The information sector includes those industry sectors which produce information, such as physical scientists; process information, such as government administrators; distribute information, such as university instructors; or which are part of the information infrastructure, such as photoprocessors.

Discussion of the implications of the information age for rural areas raises the question of what kinds of information technologies are likely to invade rural localities and what changes their use may bring about.

The telecommunications capability for rapidly sending and receiving large quantities of information is, fundamentally, one of the most important features of the rural information infrastructure. Telecommunications is to the information age what highways and railroads were to the industrial age. However, it would be a mistake to think of future telecommunications capabilities as simply a beefed-up version of today's rural telephone systems or most communities' television systems.

The ends of the existing network, especially those ends going into rural areas where precedence has been given to achieving broad coverage at the expense of quality (e.g., party lines), have very little capacity. The use of fiber optics, in appropriate combination with satellites and digital switching, will provide a low-cost, broad-band capability from one end of the telephone system to another. The potential result is a very high quality and capacity transmission from one point to any other point.

For information purposes, the distance from Seattle to Stockholm might become no greater or more costly than the distance from a farm to the nearest hardware store.

Implications for Continuing Higher Education

Continuing educators have been pioneers in the use of information technologies. There is a large and international body of knowledge on distance learning—much of which uses or proposes the use of electronic technologies. However, little of that knowledge has truly become infused into the body of the institution.

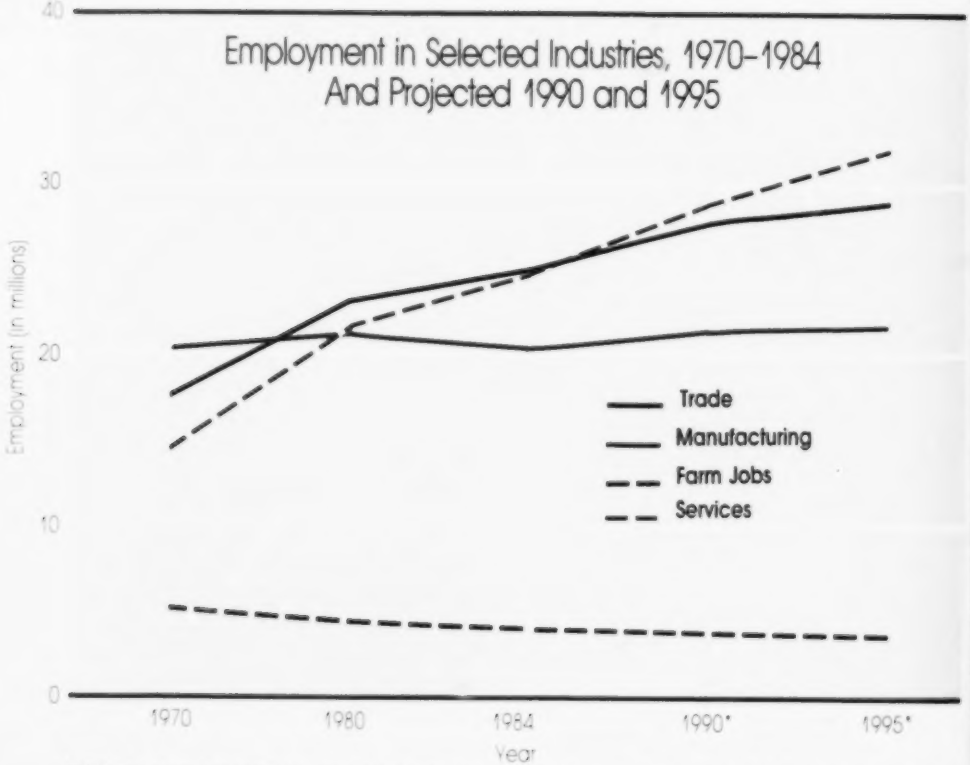
While employment levels in industries such as services and trade have exhibited considerable growth since 1970 and are projected to expand even more through 1995, the number of farm jobs has steadily declined. The graph, on the next page, excludes some industries such as communications and transportation, which are both projected to experience steady growth through 1995.

Institutions of postsecondary education will likely be among the last to fully embrace electronic and distance learning. Most remain content to let a disappearing 18- to 22-year-old population come to them. Only the very progressive, or those with dire enrollment difficulties, have begun to use their service areas as more than a catchment zone.

If the rural areas of our country are to survive with any semblance of the current quality of life, postsecondary educational institutions necessarily will be involved, and involved in a proactive way. Otherwise, the trend lines discussed here will continue.

It is more than ironic, it is a true challenge that the drop in enrollments and the decline of rural goods-producing industries are occurring simultaneously. Could it be that our futures are linked?

Employment in Selected Industries, 1970–1984 And Projected 1990 and 1995



NOTE: The information sector includes those industry sectors which produce, process, or distribute information, or are part of the information infrastructure. Information industries are included in manufacturing, trade, and service totals. Graph excludes some industry sectors.
*Projected totals.

SOURCE: U.S. Bureau of Labor Statistics, *Employment Projections for 1995*, Bulletin 2253, April 1986.

Responding to Rural Needs

Developing Rural Communities

Robert Beech
Senior Program Officer
McKnight Foundation

In considering alternative approaches to economic development, I would emphasize the important role that private funding can play in stimulating community action. I had an opportunity to see this work in rural Minnesota where the mining industry is producing at only half its capacity.

What do you do with that double capacity, double the people, double the school systems, double the electrical generating capacity, double the store fronts? Obviously, you get a depression and a decline. In Minnesota, people are talking about the fact that we are moving toward two economies, one urban and affluent and one rural and poor.

Several years ago, the McKnight Foundation realized that it was not having any impact on rural Minnesota, so some of the staff began moving around the state listening to people, trying to find out what was going on out there in the poorer half of the state. They discovered that the financial resources necessary to deal with the problems of the rural communities were not out there.

In an effort to reach these communities, the McKnight Foundation established the Minnesota Initiatives Fund to enable local communities to have a stake in planning their future. Each of six regions up and down the state was given an average of $2.5 million to be administered according to locally established criteria and by locally appointed boards and staff members. The funds have made possible a variety of activities, and through small revolving loans have enabled community groups to look beyond the bottom line and to take risks.

It is important not to become too enamored with the phrase "economic development," and to be able to distinguish between economic development and "community development." Economic development is highly trained people with good technology trying to figure out what to do for other people. Community development is facilitating self-help and cooperation among the citizens of a community. It allows the issues of values and quality of life to be considered. In contrast, economic development often tends to be too narrow and to focus solely on the "bottom line." Community development implies a broad approach to development. It promotes consideration of the implications for the health of the total area of, say, relocation of an industry.

Training Local Leaders

Douglas McAllister
Director, Virginia Cooperative Extension Service
Virginia Polytechnic Institute

Higher education can play a major role in upgrading the quality of local leadership in rural America. Programs offered by the Cooperative Extension Service at the Virginia Polytechnic Institute target local elected officials as key role players in rural revitalization. Technically competent, proactive leadership is essential to build and maintain communities.

Like the Minnesota Initiatives Project, the Community Resource Development Program is based on the philosophy that people in a community have a right and obligation to participate in making decisions about matters that will affect their communities. Community development involves a process whereby those in a community arrive at group decisions and actions to improve their well-being.

CRD programs employ a variety of educational methods, such as conferences, workshops, computer applications, home study, audio-visual packages, technical consultations, and research reports to upgrade the skills and expand the vision of local leaders. Specialized offerings include institutes for economic development and community planning, government training, and the application of computers to local government decision making. Such techniques provide local officials in rural areas with the means to approach planning problems in a systematic way using some of the same analytical tools available to their urban counterparts.

Implications for Higher Education

Representative Steve Gunderson
(R-Wisconsin)

The problems that agriculture is experiencing today are the problems of transition. Competition from abroad in the area of manufacturing is increasing. High technology agriculture is rapidly developing. The predicted levels of increased productivity are nothing less than amazing. We can look at Wisconsin as an example of these changes.

In 1970, we had 66,000 dairy farms in Wisconsin, with an average herd size of 33 cows. In 1985, we had 44,000 farms, with an average herd size of 44 cows. We project that by the year 2000, we will have approximately 33,000 farms, with an average herd size of 66 cows. During this 30-year period, we will have cut the number of dairy herd farms in half — which tells you why we are having a rather significant change occurring in rural America.

Higher education should continue to help farmers survive in the highly technological, specialized, and competitive industry, which is nothing like agriculture in the past. The mission of cooperative extension is to assist the family farmer to respond to the new technological changes in agriculture.

A couple of final thoughts for the education community. First, you in your particular state must be sensitive to and respond to what I call the "comfortability gap" between higher education and rural folks. Most rural folks are scared to death of college campuses.

Gunderson: "Higher education should continue to help farmers survive."

Second, you need to upgrade your extension and economic development personnel if you want them to continue to be of service to your state. I think we all need to admit that there are economic development personnel out there—local county agents, farm agents, resource agents, home economics agents—who are not in tune with the times.

Third, recognize that more than anyone else in America, rural folks are resistant to change. We need to deal with that resistance before we can succeed in any of the initiatives we undertake.

Reaching Rural Communities

J.O. Grantham
Director, University Extension
Oklahoma State University

Separated by vast distances and isolated from news markets and educational institutions, rural residents are in particular need of high quality information delivery systems. New methods of telecommunications can help compensate for some of rural America's current problems.

Those of us in education and training have to take a hard look at the needs of those we serve. The cooperative extension service has a long tradition of working with people in their own environment. It was in the reexamination of this mission, and in looking at the service that should be rendered in the future, that the role of telecommunications at OSU began to take shape. It had become increasingly clear to us that in the years ahead, more and more Oklahomans will be staying in or near their own homes to obtain their education and training.

From left, panelists Douglas McAllister, Sue Spencer, J.O. Grantham, and John Duffy examine higher education's contribution to the vitality of rural America.

Residents of rural America already have many of the devices of the information age: radios, telephones, televisions, stereos, even VCRs, cable, and satellite dishes. Acting on a report from a special committee appointed by OSU's president in 1980, the State of Oklahoma has invested in a statewide telecommunications network linked by satellite with 36 receiving sites in cooperative extension offices. No person has to travel more than 40 miles to attend educational programs delivered by satellite. Costs are going down and the number of programs is rising each year, with offerings on such topics as horticulture, master gardening, international trade, osteoporosis, neonatal care of horses, and new farm legislation.

Telecommunications can even be made to assist the poor, if local community gathering spots, such as churches and taverns, are equipped as receive sites for satellite transmissions. We are only scratching the surface of the potential of this media.

Telecommunication networks are also a means to improve the regular course offerings of elementary and secondary schools in rural areas. For example, a course in German I, taught by an Oklahoma State University professor, is taken via satellite by 1,000 students in 100 high schools across the state. Interaction is made possible by computer, and the success of the course has prompted requests for others, including German II and physics.

Upgrading Rural Education

John Duffy
System Vice President
University Campuses and Continuing Education
University of South Carolina

The University of South Carolina, working with South Carolina ETV, is committed to using telecommunications for educational purposes. For example, since 1969, the College of Engineering has offered a masters program statewide via educational telecommunications. Three of four closed circuit channels, owned and operated by South Carolina ETV, are devoted to educational programming between 4:30 and 10:30 p.m. each day, reaching some 3,000 students annually. This programming is offered by the University, and is primarily at the graduate level, through the colleges of engineering, business, social work, nursing, and public health. The University also uses educational telecommunications to provide undergraduate-level courses in engineering to students studying at regional campuses around the state.

In addition, South Carolina is using its graduate regional studies programs to serve teachers throughout the state. For more than a decade, regional campuses have worked with local school districts to bring community needs to the attention of the University. Five years ago, the program was

expanded to serve multiple school districts in poor rural areas. A consortium of 13 school districts is cooperating with the College of Education and the Rural Education Center to identify promising future teachers and support them with scholarships. Following graduation, participants are expected to teach in their local school districts and help in the study of rural problems.

Providing State Support

John Crothers
Assistant Commissioner
Tennessee Department of Economic and Community Development

State government can act as a catalyst in many areas of change affecting rural America. Cooperation between Tennessee Governor Lamar Alexander and the state legislature, along with the active participation of Tennessee industrial leaders and businessmen, has propelled the state's economic growth to the highest level ever in the South. Projections about future jobs and the skills needed for them have been translated into educational reforms, including a requirement for computer literacy for every seventh grader and a $32,000 salary for teachers, even in the poorest counties.

Local concerns are central to the state's current boom. Research parks, developed in connection with state universities, are a means to drive homegrown industrial growth. But, local planning is a must: rural areas must take the initiative on their own behalf.

If I wait until all these policy issues are settled at the highest level in Washington or Nashville and filtered down to me before I do anything, then not much is going to get done. Similarly, if the rural counties wait until the metropolitan centers start thinking globally and start involving the rural population in their plans, then they will starve or die of thirst before it ever happens, in most cases.

Defining Higher Education's Response to Rural Needs

Judi Hackett
Director
Center for Agriculture and Rural Development
Council of State Governments

We operate a national clearinghouse of information on state rural development programs. Although rural areas in all parts of the country share many of the same fundamental problems, the responses to these problems have been remarkably diverse. These include programs to provide transitional tools such as financial assistance, retraining, counseling, and development commissions. Development programs related to agriculture include marketing, export development, and crop diversification.

The biggest explosion of programming activity has occurred in non-farm rural development projects. These include entrepreneurship, business incubators, job creation and training, industry relocation, technology transfer, tourism, parks and recreation, and infrastructure improvement. Many of these are evolving from a "bottom up" demand for new programs by local communities, rather than as a result of state or federal initiatives.

Each of these areas presents multiple opportunities for higher education's involvement. However, it strikes me that policy-makers are not making good use of the research and service capabilities of the institutions of higher education in their states. Educators do not do everything well, and there is a tendency to focus one's responses to fit one's own interests and resources. We must be careful not to make too many promises.

I would challenge each of you to carefully frame the questions that you want to address and that you want your state policy-makers to address in dealing with the problems of rural America. That is one of the major contributions that institutions of higher education can make. Secondly, I want to challenge you to review the service mission of your institutions as it relates to rural America and to do everything you can to emphasize its importance and raise its visibility within the state government community.

Adapting to Changing Needs

Allan Ostar
President
American Association of State
Colleges and Universities

Recently, a national commission chaired by Terrell Bell, examining "The Role and Future of State Colleges and Universities," emphasized the importance of providing adults and part-time students full access to undergraduate and graduate programs. Certainly, this raises problems for institutions directed to serve rural populations. But those problems are not insurmountable. The Bell Commission urged state colleges and universities to restructure their modes of delivery and instructional services to ensure that adults in all regions, through instructional television, instruction in the workplace, and faculty-designed, computer-aided instruction, have meaningful access to these programs.

Higher education has already demonstrated a remarkable ability to adapt to changing needs. For example, look at the experience of Eastern Oregon State College, which serves a large geographical area suffering from declines in agriculture and lumbering and a loss of population. Although declining enrollments might have led to the College's demise, the legislature instead charged Eastern Oregon State College with changing its role to serve as the economic, social, and cultural resource for the entire region. As a result, Eastern Oregon faculty members now devote 50 percent of their workload to public service activities, applying their academic specialties to the needs of the communities in areas such as zoning, land use, public education, and health delivery systems.

Diverse Responses

Morton Weir
Vice President of Academic Affairs
University of Illinois

In responding to the needs of rural Americans, continuing higher education leaders need to evaluate the basic strengths and missions of their institutions. For research universities such as the University of Illinois, these strengths are continuing professional education and basic research. I don't think that we should be apologetic about our mission. What we need to do is to match what we can do well with the needs of rural Americans, and realize that no one institution can deal with all problems.

This does not suggest that doing what you do best means being unresponsive. Consider the problem of illiteracy in rural areas and how the University of Illinois might respond to this problem. The University should not send its faculty out to try to teach people to read and write. However, what we very well may do is to develop in-service training programs for teachers who have never worked with adult learners. Thus, we would be responding to illiteracy in the best and most appropriate way we can.

From left, CHEL Commissioners Morton Weir and Allan Ostar.

While there is a real need for us to reassess our missions regarding rural America, we need to be sure that as institutions of higher education, we concentrate on what we do best. Community and technical colleges, for example, would have a very different outlook from the research institution's, and so would provide different services. No single institution can serve all of the needs of rural America, but working together, each making our appropriate contribution, we can make a substantial difference.

Meeting International Challenges

Raymond Miller
Vice President for Agricultural Affairs
Dean of the Colleges of
Agriculture and Life Sciences
University of Maryland

Americans have been too complacent about foreign competition. The pace of technological innovation, the shift of manufacturing and service industries off-shore, and new alignments in trading partnerships, all signify a new global context in which to consider the future of rural America.

Many of the problems of rural communities are longstanding and systemic, but the need to identify and act on them has become critical in the face of fierce international economic competition. As Frederick Humphries observes, we have already conceded the textile and electronic industries to the Pacific Rim countries, South America, and Mexico. As a direct result of such shifts in the economy, we are experiencing an erosion in the quality of life in rural America.

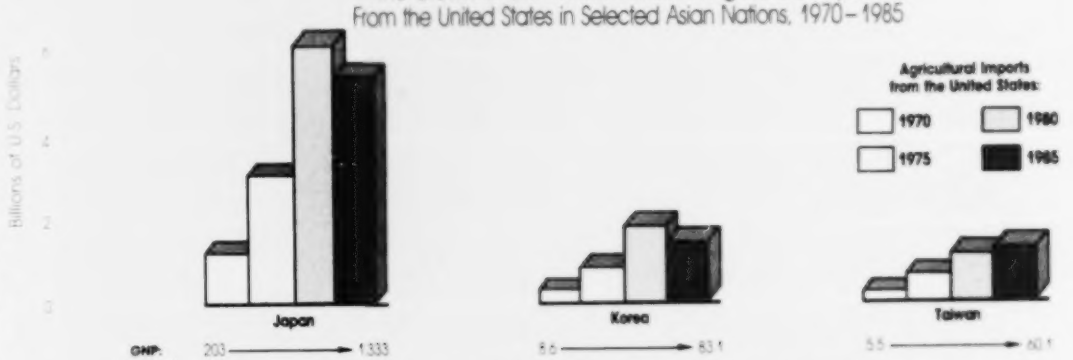
In the not too distant past, companies tended to locate new plants in rural areas, particularly in the South, to take advantage of low tax rates and labor costs. Those facilities are now being moved abroad. Economic development may leapfrog from urban areas at home to third world sites, skipping rural America altogether. There are already signs that this is happening. The recent decision by American Airlines to transfer its entire high tech reservations system to Jamaica is an example of this potentially dangerous trend.

New players entering the international market have followed the industrial progression of Japan, from the manufacturing of cheap consumer goods, to processing steel and fibers, to exporting automobiles, electronics, high quality steel, and chemicals.

Financial capital moves easily internationally, but there is one kind of capital that does not, and that is human capital. What these countries have been doing over time is developing their human capital, which is the only real competitive capability that a country has. While these countries have been increasing their human capital, what has this country been doing? We've been letting ours run down.

Paradoxically, the economic development of these countries also serves the interests of producers in the United States. The growth of the Gross National Product in Japan, for example, has been paralleled almost exactly by agricultural exports from the United States to Japan. This is true for our exports to Taiwan and Korea as well.

The Growth in GNP vs. the Growth in Agricultural Imports From the United States in Selected Asian Nations, 1970–1985



SOURCES: U.S. Department of Agriculture, Economic Research Service, *U.S Foreign Agricultural Trade Statistical Report*; World Bank, *World Tables*, Vol. I, 1983, and Economist Intelligence Unit, *Annual Economic Review*, 1985 no. 68, 1980 no. 38, 1975 no. 38.

The Global Economy and Rural America: Implications for Higher and Continuing Education

Douglas Treadway
President
Southwest State University
Former President, Western Montana College

I would like to address the role of the rural spirit and mentality in the context of the international global economy. A recent newsletter of the Rural Coalition (October 1986) contained a wonderful summary of that rural spirit.

There is a rural America of increasing joblessness, disappearing farms, misused lands, polluted air, contaminated water, and the poverty of discrimination, but there is also the rural America where against all odds, citizens are joining together to fight for a different vision. Our rural America is a place where people who don't farm can still care about those who do, where people who have jobs care about those who don't, where people are still humble enough to want to learn something from someone else. We are willing to go great distances to listen and to learn.

Rural communities in America exist within an urban-oriented society, whose values and "bigger is better" schemes constantly intrude upon the viability of the rural community; whose agencies attack rural communities with fragmented programs and uncoordinated services. These scenarios can present a discouraging picture, but I believe the potential for positive change is great.

In the mass society industrial model, competition is seen as the challenge. But in the information age model, more appropriate to the current world economy, we must talk about collaboration. There is a big difference in strategy and visions between the two; are we trying to defend ourselves from foreign competition, or are we looking at a new age collaboration model of the global economy?

The global economy of the collaboration model is applicable to rural America. Many examples can be cited: from a Navajo reservation community college working with Israel; to a college in Maine cooperating with the British Open University System; to a college in California working with Costa Rica. These projects are not based on a sense of superiority or some type of missionary approach, but are based on the equality of all parties involved.

Higher Education and the Global Economy

The concept of a global economy has several major implications for continuing and higher education. First, it is not clear that the higher education community has embraced the reality of the global society. How many are fluent in another language, or two, or three? How many institutions that host visiting groups from other countries have people fluent in their language? It is only reasonable that we take the time and attention to learn the languages of those countries that we assume to host and become involved with.

Each community, each institution, operates from a different context, and how it embraces the reality of the goals society has built is going to differ from one community to another. Each of us in our own way must fight the natural tendency toward ethnocentrism.

This is a two-fold challenge which has implications for our efforts at home as well as abroad. For instance, I am in a university which is predominantly white, middle-class, and rural. I should have a sister institution that is Native American, Hispanic, or Black, so that we could begin building bridges among faculty and students right here on our own turf in the United States.

Also, there is a need for a good offense in the international arena. In recent years, we have experienced major declines in American colleges and states' investment in study abroad and international programs. The percentage of gross national product in the United States spent on foreign aid has gone down three-fold in the last five years. State universities are looking at their own concerns, not supporting national education, so that faculty can't be gone for a year of work or study abroad

lest they lose tenure or promotion points. Given this, there is little incentive to move our people out into other countries to form partnerships.

We must define roles and partnerships and participate meaningfully in the new society that requires us to abandon those messages of the industrial age which are holding us back.

Need for Involvement

There are several specific reasons why colleges and universities serving rural communities should be involved in helping their constituents understand a global perspective, and I will cite just a very few.

First and foremost, helping adults and young people who live in rural communities to understand this global economy provides a major psychological benefit. There is a sense of victimization that our rural residents feel now, those who have lost their mills and their plants and their farms. They do not understand the forces at work on their lives. If they can, through knowledge and experience, understand what is happening to this economy, and be empowered as players rather than as victims, this in and of itself would be a tremendous service.

Second, universities and colleges can mobilize positive energies. For example, Western Montana College is talking to a college in Japan about developing a tourism industry in southwest Montana. This is just as "do-able" anywhere in the United States today, as we become aware of the opportunities, cultural parameters, and needs of other countries. Educational institutions in rural communities can capitalize on the widespread interest in foreign investment in the United States.

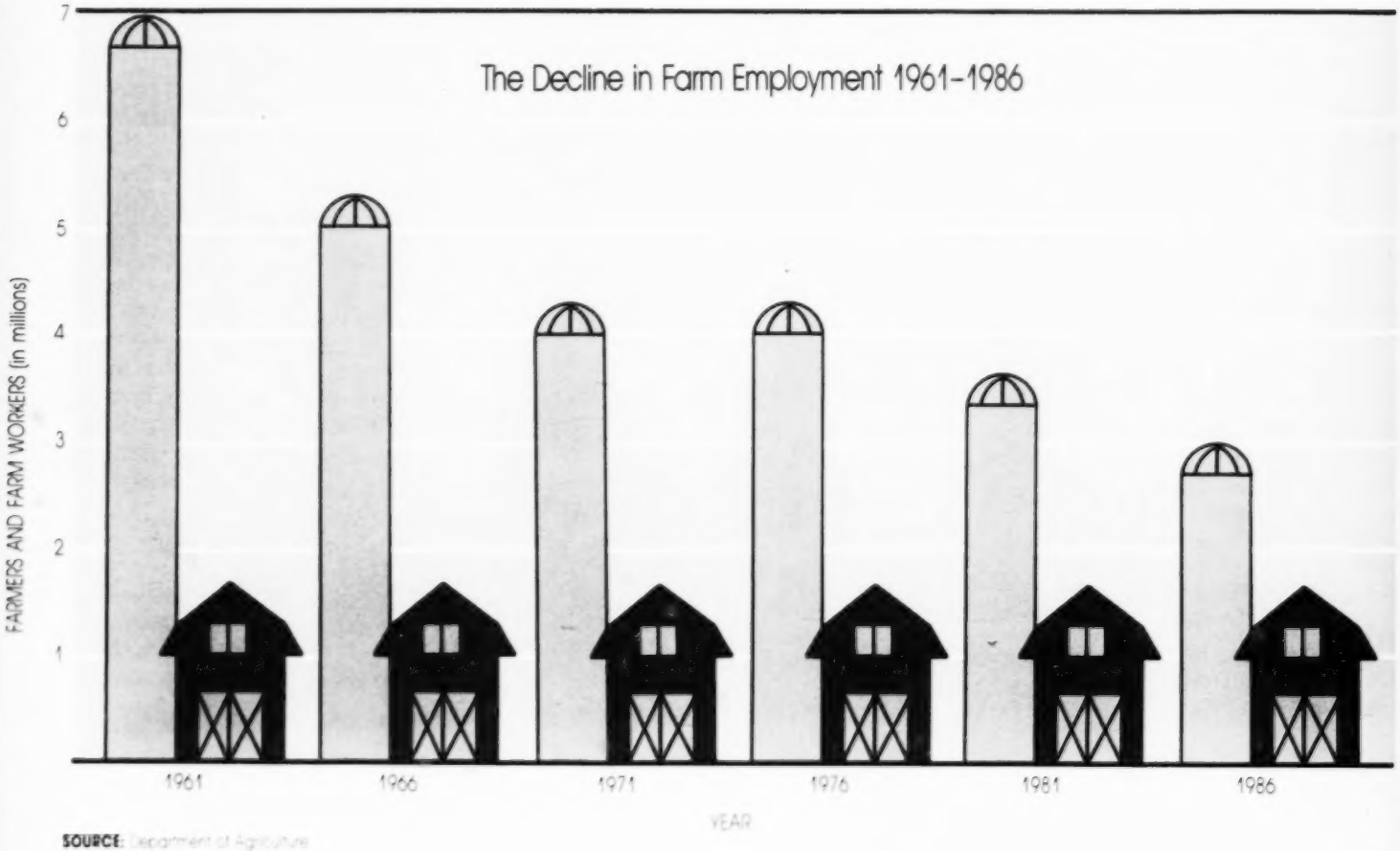
Douglas Treadway

Third, the educational forum needs to get into the policy-making arena. The Department of Agriculture needs to hear from rural communities, certainly in formulating its ag book policy with respect to developing nations.

Last, and perhaps most obvious, the youth of today in our higher education institutions are the citizens of this multi-cultural, global economy, and certainly they need more pathways. On the basis of my experience in Dillon, Montana, I have seen the benefits of study abroad programs, and faculty and student exchange programs with sister institutions. This applies across the board, not just to a little satellite unit on the edge of the university. There should be 10 houses at every school for visiting foreign professors and their families, and there should also be the converse. There are many ways to pursue international exchange. The rationale for pursuing such exchange stems not from any moralist notion, but from our legitimate economic self-interest.

The Rural "Brain Drain"

Rural communities have some very specific concerns. Primarily, small towns are dealing with issues such as the need for more jobs. Those jobs are needed for the youth who are leaving the rural areas. Forty-five percent of the educational investment in this country comes from small towns which essentially export that investment to the city. There is no return to rural school districts or colleges for this investment because the young are not staying in rural communities. This trend must be reversed.



SOURCE: Department of Agriculture

The number of farmers and farm workers employed in America declined from seven million in 1961 to approximately 3.2 million in 1986; a loss of nearly 3.8 million agricultural jobs in the 25-year period.

One possibility is to look to small business industries for jobs for young people—jobs for young people coming in at entry-levels with basic skills, for those with vocational education backgrounds, and also for those with four-year college or university backgrounds. Creativity is needed to locate off-farm supplemental incomes for those farmers and families in ranching who are trying to maintain their way of life, but can't do it through the agricultural enterprise alone.

We need to find resources locally for those who are commuting long distances now and sending their paychecks back to Montana from Alaska or Georgia or wherever they are, and also find resources for the structurally unemployed.

Those are the areas which comprise the main agenda for most people in rural community development. How does that auger for the agenda of continuing education, of higher education? Is there a good fit, or are there two different worlds?

At this point, it is not clear that the continuing education community is plugged in at all to the *primary* development agendas of rural communities.

The Easy Answers

There are some strategies which are apparent and ready-at-hand, and very much worth pursuing. We need more programs allowing exchanges among administrators. Administrators should work and study abroad, get into industry, and enter exchange programs just like faculty and students do. This would be an excellent way to develop more visionary leadership. Obviously, visionary administrators and program directors need to hire faculty who understand the type of society about which we are talking.

If we do not have the resources, we must find ways to cultivate them. We need incentives. If they looked seriously at their tenure and promotion policies and at the actual practices of higher education, most institutions would not find a great number of incentives for their faculty to work and study abroad.

Sister institution arrangements are readily available. Far more schools in other countries are looking for partners in the United States than there are partners in the United States looking for other schools.

Focus groups of our clientele are needed, including farmers, school districts, health care providers, and businesses. These groups are needed to help us make valid needs assessments and to design programs and services that can be adapted to the needs of the global society as our constituent groups perceive them.

The private sector can sponsor some of this activity. The interstate banking system is certainly willing to pay for a symposium on the issues of the global economy. Many consumer groups with self-interest will help support a more informed society; we ought to be addressing and pursuing planned partnerships with them. If we do the job of presenting information and educational experiences, I am certain we will find people to help pay for them.

The nations of the world, Tocqueville once said, are like travelers in a forest. Although each is unaware of the destination of the others, their paths lead inevitably toward meeting in the center of the forest. Given a world history of separation and mistrust, many nations are looking toward converging on a new clearing. Educational opportunity and understanding are the means for creating that clearing today and for the future.

The Academic/Rural Split
How it Happened and Why it Should Change

Frederick S. Humphries
President
Florida A & M University

I am a native Floridian, born in Apalachicola, Florida—a rural town with a population of 9,000.

Its seafood driven industry is representative of the current problems confronting rural America. When I was a boy, Apalachicola was far more vital than it is today, and this pattern of decline can be seen elsewhere in rural America.

I had the opportunity to sit on a commission charged with revitalizing and preserving the quality of life in Apalachicola. The chance to look holistically at the development of my hometown was a strong influence on me.

Another important personal influence is the fact that I served as president to two 1890 land-grant institutions. I had to become familiar with the land-grant system and its function in our society.

Most of my remarks are germane to the South, where I have spent most of my professional life trying to understand the region's problems.

Trends in Education Enhance Rural-Urban Split

At the same time that I came to recognize the problems of our rural areas, I have seen a virtual revolution occurring in higher education. Almost all of higher education is taken with high technology. The age of information technology, laser optics, micro electronics, and biotechnology is upon us and consumes us; we are striving to turn our research scientists in that direction.

We are computerizing our campuses and working to have a computer on the desk of each faculty member and administrative officer. The ultimate goal is a computer in every dormitory room and off-campus apartment so that computers become an integral part of higher education institutions.

Further, the establishment of business-university relationships is becoming increasingly important, we strive to develop high tech expertise and resources. It is the reality of high tech, its nourishment and its requirements, that provides a partial raison d'etre for this forum. High technology industry has largely found the nutrients for its growth in the urban and metropolitan areas.

This pursuit of high tech in industries is a direct result of a manufacturing, industrial nation moving to a high tech nation. Somewhere between 75 and 90 percent of the population believes that our success is measured by how successful we are in garnering all the aspects and productivity of a high tech society. We badly want to do that in order to maintain the affluence and leadership of our society. It appears to me that we have effectively conceded the manufacturing aspects of our economy to other nations.

Technological Advances Leave Poor Behind

The direct result of this shift in our economy is an erosion of the quality of life in rural America. Technological advances, biotechnology experiments, and the application of genetic engineering to agriculture have resulted in a nation where 95 percent of all food and fiber is produced by 30 percent of our farmers. Even this figure underestimates the concentration of production, as most of the output comes from the 20 percent of large, mechanized farms. Meanwhile, only 5 percent of our food and fiber is produced by 70 percent of the people who are engaged in farming—that is, the limited resource farmers, or the small farmers in the lexicon of agriculture.

You may recall a book on the method of using a mechanized process to pick a tomato so as not to bruise it. For best results, you want to keep the body of the tomato inside the skin and at the same time change the texture of the skin of the tomato so it can be picked by a machine. The application of our technology led to the development of a hard tomato; the skin was tough enough to withstand mechanical picking. When that occurred, many of the people who were engaged in the tomato picking industry were left unemployed.

When I went to the University of California, Davis, to look at what an 1862 land-grant institu-

Frederick Humphries

tion was, I saw many acres of experiments devoted to nothing but growing tomatoes, refining the taste and the juiciness of the tomato as well as making improvements in the skin. Every time I looked at that field, I saw a reduction in the labor intensity of the industry because of biotechnology. This has a direct connection with a major problem in the rural South, which is that 25 percent of the rural South is poor. The numbers have grown dramatically since 1980 and are still increasing.

Rural communities are less likely to be able to attract industry, even though industries have been trying to relocate to take advantage of cheap labor present in the southern region of the state. Rural residents are less educated and less likely to have the skills to support high tech industries. Thus, small and Black farmers who cannot make a living from farming, and are seeking alternatives, take on jobs paying minimum wages that still result in poverty.

Sociologists and public administrators have found that people in rural areas have the initiative and want to work, but cannot rise above poverty given the level of job opportunities available in their surroundings. Rural, southern minorities are among the nation's poorest groups, yet they still are a significant part of the human capital in the South.

Rural Areas Lack Resources For Academic Standards Bandwagon

The new academic standards for all of us in each state have risen in response to *A Nation at Risk*. The South is leading the revolution in the reform of education. Almost all states are requiring from 22 to 24 academic units for graduation from high school. In order for students to be eligible for admission to a higher education institution, they must have four years of English, three years of mathematics, three years of science, four years of social science, and two years of a foreign language.

Ironically, the people least likely to meet those academic standards, and therefore go on to college, are from rural communities found in the South. They do not have the tax base to meet the cost of increasing standards in the school system, and they cannot attract teachers who bring the necessary skills to carry out improved programs. And yet, it is precisely these rural communities that most need the improvements.

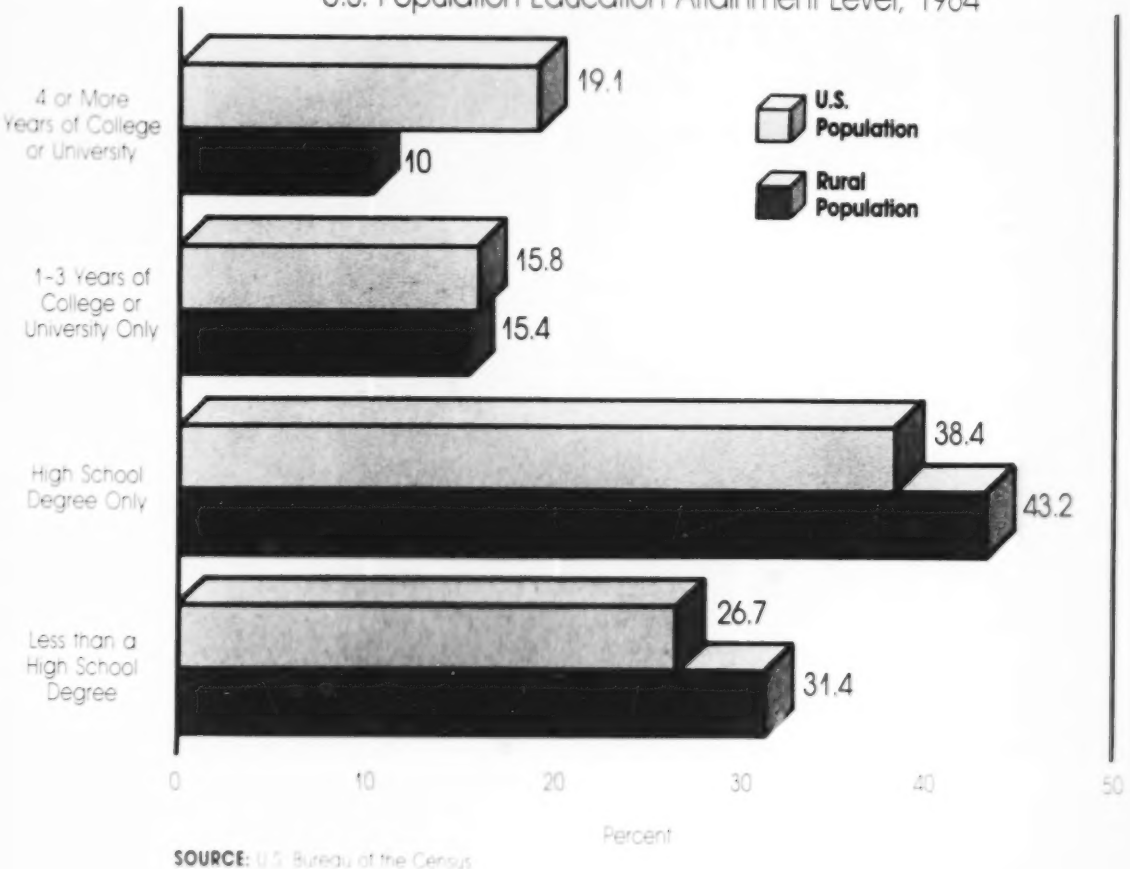
While I was president of Tennessee State University, the governor initiated an increase in minimum standards for high school graduation. Rural counties in the state did not have the tax base to carry out the programs necessary to meet the new academic standards, so the standards in effect discriminated against rural communities. They clearly lessened the opportunities for students coming out of rural high schools.

The Rural Dilemma

Women and children are more and more the rural poor. The people who are locked in rural America are women and children who are undereducated, unemployed, and unable to earn a reasonable subsistence income. Eighty percent of all Black children in the South under the age of six are being reared in poverty. Even in the best of communities in the rural South, 40 percent of the Black children under the age of six are reared in poverty.

Rural communities lack adequate transportation. There are no buses or trains in my hometown today. Rural communities lack adequate social services. Teenage pregnancy is a problem in rural communities as well as in metropolitan areas. Rural

Rural Education Attainment Level vs. the General U.S. Population Education Attainment Level, 1984



SOURCE: U.S. Bureau of the Census

Rural education attainment levels from high school through college lagged behind the attainment levels of the general population. Most significantly, nearly twice as many individuals in the general population had attended four or more years of college-level education as had individuals in the rural population.

communities lack the infrastructure to attract industry; even when industries settle in rural areas, they tend to stay away from areas where Blacks live.

Just as in the rest of rural America, the backbone of the rural South's economy has been agriculture. Due to mechanization, there has been a steep decline in agriculture in most rural areas. That decline has resulted in lost jobs and lost opportunities, none of which have been replaced. The growing numbers of displaced workers lack the education and training to gain non-agriculture jobs. In 1986, only 41 percent of the Black farm population had graduated from high school. There is a terrific problem of educational disadvantage in the rural South. And, at the rate that Black farmers are going out of business, the "Black Belt" will not exist by the turn of the century.

These are the problems that must be faced when trying to find solutions to the problems in rural America.

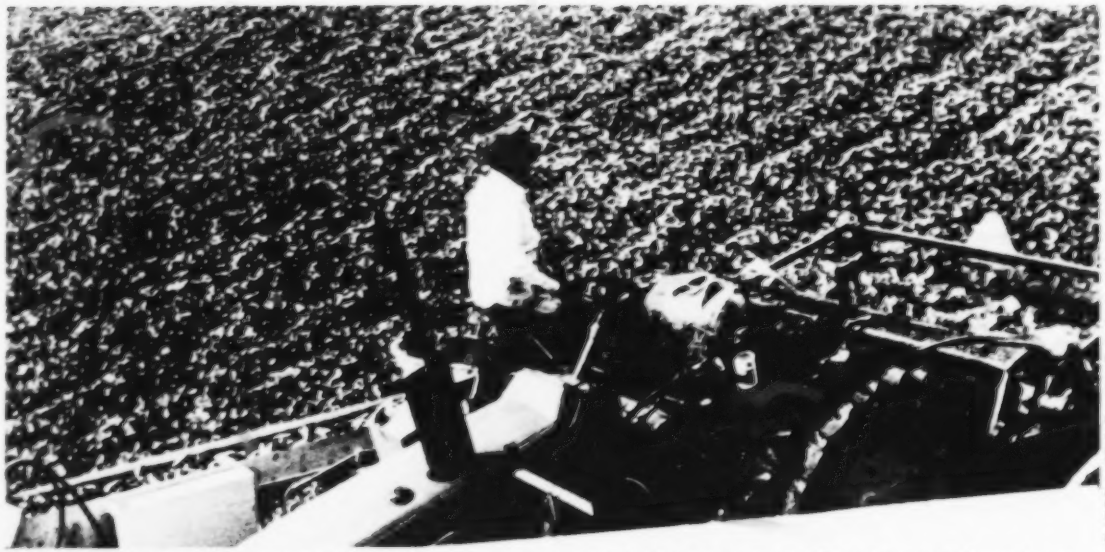


PHOTO: USDA Photo, Courtesy of Rural America

Because of the rate at which Black farmers are going out of business, the Black-owned farm is endangered, and by the turn of the century the "Black Belt" of the South may not exist.

Land Grant Institutions: Bureaucratic Bias Against the Small Resource Farmer

The higher education community represents a vast resource of human expertise that can address many of these problems. Take agriculture—two types of land-grant institutions have been created: the 1862 land-grant institution created by the first Morrill Act, and the land-grant institution created by the second Morrill Act in 1890.

Every state has an 1862 land-grant institution designed to be the "people's" institution. Agriculture today is a direct result of the symbiotic relationship between the instructional program and the research capacity of those land-grant institutions and the extension programs which address directly

the problem of the farmers. As a result of this relationship, we have produced an agricultural production system in America that is the envy of the world.

Because of segregation in the South, the second Morrill Act in 1890 created the historically Black land-grant institutions in the South. Consequently, 17 southeastern states have two land-grant institutions: the 1862 and the 1890.

In the future, all states in the South may also have two classes of folks, the rural poor and the affluent urban residents.

The 1862 land-grant program enjoys a healthy appropriation from the United States Department of Agriculture, allowing it to carry on an extensive program in agricultural research and a generous extension program with agents in every county of the state. The states match the federal government's funds, and counties and municipalities also contribute.

Conversely, 1890 institutions have over the last 20 years focused their attention on the "limited resource farmer." This emphasis is due to the fact that most Black farmers in the South are limited resource farmers. At the same time, these institutions operate with budgets representing approximately one-twentieth of the dollars used by 1862 institutions in carrying out their work. The 1890 institutional budgets for research and extension are only about $1.5 million to $3 million in the South. No matching state funds exist, nor are there any contributions from counties or municipalities.

This inequity results at least in part from a pervasive attitude that helping the small farmer is a "social service" rather than an attempt to promote the economy in the rural South. This view must be overcome. Over the years, the poor people in the rural South have not become political. An organized agricultural constituency is needed to keep the dollars flowing from the state level. Because small, limited resource farmers are not organized, they have no clout when it comes to protecting their interest in the legislature.

The public policy researchers at our campuses could be very helpful in creating the justification and rationale for increased state support for these small and limited resource farmers.

Outreach Programs

Biotechnology is independent of the scale-size of a farm. There are fruits to be enjoyed by all with the application of biotechnology to agriculture and the production of agriculture. Yet little research has been done regarding the application of biotechnology to the different spheres of farming—specifically regarding how it could help the small, limited resource farmer. Biotechnology can have an important role in making small farmers profitable and productive. It also represents the potential for the creation of jobs—restoring a place for the limited resource farmer in the economic mainstream of rural America and the rural South.

There are many outreach programs that can benefit the rural South. The Gatson County school system runs one such program. It seeks to increase students' ACT and SAT scores through tutorial programs and workshops.

Because Gatson County has lost people, enrollment in the school system is down and many of the area's teachers are unemployed. As standards increase, however, there is increased need for science and math teachers, and we are offering a retraining program for teachers. Teachers who were in the social sciences are being retrained to teach math and science, to meet the needs in the county. Another project helps retrain teachers in foreign languages to meet our future requirements.

One final comment regards development in rural America. I would like to emphasize one more time that even though some industries are relocating in rural areas, the rural population does not have the skills to meet their demand. Therefore, the placement of high tech industries in rural communities generally does not help the indigenous population.

A symbiotic relationship must be established between rural communities and the urban metropolitan areas, and the academic community has an important role to play in that process.

Model Rural Development Programs

The *Best of Missouri's Hands* and *Best of Missouri's Farms* Catalogs

The University of Missouri-Columbia (UMC) initiated the "Alternatives for the 80s" project in 1985, in cooperation with Lincoln University and UM University Extension, to help create opportunities for Missouri's rural citizens. The "Alternatives for the 80s" seeks to integrate the state's many resources into a structured economic development project that can bring economic benefits to rural communities throughout Missouri.

One of the most successful outcomes of "Alternatives for the 80s" has been the *Best of Missouri's Hands* catalog. Published in July, 1986, the catalog is a 300-page glossy magazine size catalog, amply illustrated with both black and white and color photographs of the works of some 180 rural Missouri artisans.

The artisans listed in the catalog were identified through the county extension networks and responses to direct mail requests, and were included in the catalog free of charge. Individual artisans were selected on the basis of product quality and relevance. The enthusiastic crafters have been among the best sellers of the catalog concept as a boon for Missouri businesses. University Extension funded the catalog, which cost almost $70,000 to produce.

The goal of the *Catalog* is to expand the retail options of rural Missourian artisans who otherwise would not have access to large developed markets. And this has happened. Within six months of publication of the first edition of *Best of Missouri's Hands*, 66 percent of the artisans listed had received orders of up to $2,500.

The second edition of *Best of Missouri's Hands* is scheduled for publication in spring 1988. A number of other states have contacted UMC about starting similar projects. With an expanded budget, University Extension expects to increase substantially nationwide marketing of the catalog, and is exploring a move into international markets.

The success of *Best of Missouri's Hands* has generated another catalog project, *Best of Missouri's Farms*, to help rural Missourians market their farm products and natural resources. This catalog, too, aims to provide rural Missourians with an alternative source of income, and to raise the public's awareness about rural Missouri and the many products and services available there.

Potential participants in *Best of Missouri's Farms* have been identified by UMC by polling the 114 county extension offices, rural co-ops, state legislatures, and the rural banking community.

The *Best of Missouri's Farms* catalog will include only those products which are grown or produced in rural Missouri, using some portion of Missouri-grown products. Potential products will be judged by a panel of experts from UMC and organizations across the state.

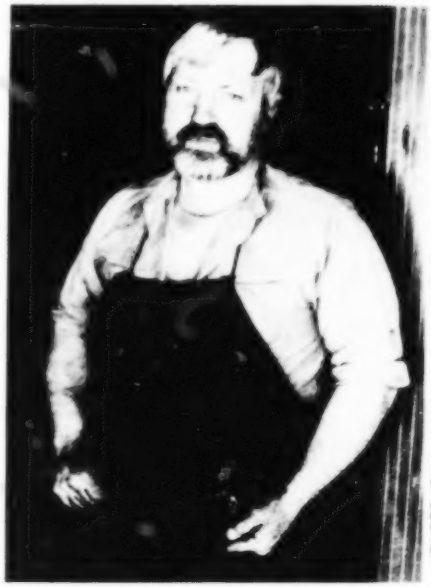


PHOTO: *Best of Missouri's Hands*

Blacksmith Darold Rinedollar's ornate gates and curved candlesticks are featured in the "Best of Missouri's Hands" catalog.

The new catalog concept has met with considerable interest to date. It is hoped that *Best of Missouri's Farm's*, like *Best of Missouri's Hands*, will bring increased attention to Missouri's high quality items and produce and improve the rural economy of the state.

The Missouri Product Finder

The University of Missouri-Columbia (UMC), Lincoln University, and UM University Extension, in cooperation with Missouri Ingenuity, Inc. and Missouri's Department of Economic Development, have designed the Missouri Product Finder to help rural producers locate outlets for their products in a shrinking market. The Missouri Product Finder is a data base system which identifies all industrial resources in Missouri including manufacturing, mining, agribusiness, architecture and construction, computer software design, and industrial support services.

Access to the data base of the Missouri Product Finder is available free of charge through University Extension. Businesses can access the data on a controlled basis and may have to pay a subscription fee in the future. A $50,000 grant from the Missouri Ingenuity Innovation Center covered the start-up costs of the data base; if necessary, future funding may come from UMC.

The first task of those involved in the Missouri Product Finder project was to identify potential participants and beneficiaries of the data base. University Extension specialists and state economic development experts aided in the search for grassroots registrants.

Second, the project has had to attract users. Regional planning boards, chambers of commerce, and purchasing agents, as well as radio, television, and newspaper advertisements, have been used to build support for the Product Finder. It is projected that by the end of 1988, as many as 12,000 registrants could be included in the data base.

The Missouri Product Finder is designed to be a flexible use system which provides businesses, state and local economic development agencies, and individuals with access to markets for their materials and to resources for their supply needs. The data base can easily be updated to keep the system current and meet the changing demands of both purchasers and suppliers.

For instance, if a producer of adhesives needed to find a source of chemicals or other materials, the Product Finder, through a system of key words, could locate sources of the materials. By choosing a category of products, materials process, or surplus, and then entering key words such as "bonding agent," the Product Finder can identify companies in Missouri that produce bonding agents. The data base can narrow the search to companies within certain counties or cross reference companies with other related products that they produce.

In more general terms, the Product Finder seeks to increase the business capacity of Missouri's rural areas and make them viable economically, by promoting small businesses which do not have the means needed to market their own goods and services. University Extension is the only comprehensive network in the state capable of taking on a project of this magnitude, because neither state agencies nor private concerns have the resources needed to cover rural Missouri.

The University of Minnesota-Morris Small Business Cooperation Office

Minnesota is among the states hardest hit by the severe economic downturn in the farming sector, and many farmers have tried to embark on new careers in small businesses. But without practical experience or knowledge of the business market, the displaced farmer may have trouble turning a good idea into a working business venture.

The University of Minnesota-Morris (UMM) Small Business Cooperation Office (SBCO) wants to help rural communities create new job opportunities and diversify the local economies to support non-agricultural jobs. SBCO's Small Business Resource Center serves as a point of entry into the business community for local residents with business ideas.

A full-time, two-person staff counsels inquirers about business subjects ranging from incorporation procedures to tax laws. In such a depressed

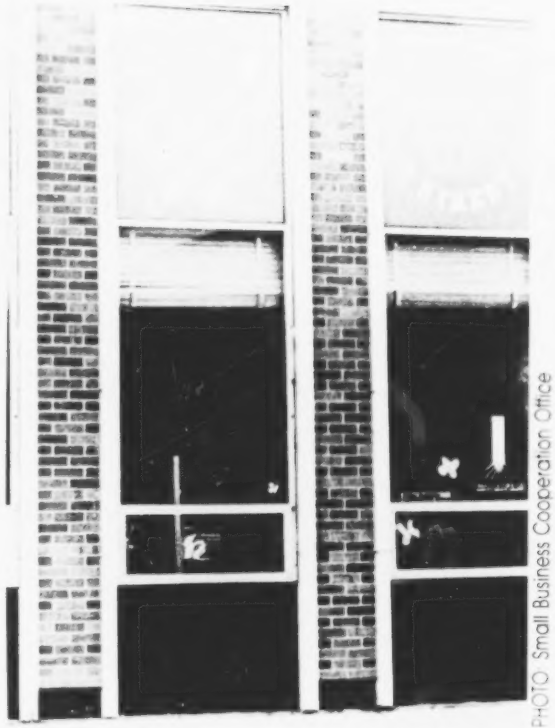


PHOTO: Small Business Cooperation Office

The University of Minnesota-Morris Small Business Cooperation Office assists rural entrepreneurs seeking advice on how to start new careers in small business.

economic area, the Resource Center directs local entrepreneurs toward scarce sources of venture capital. For cases beyond its expertise, the Center can call on the experience of UMM faculty members and several helpful local business people. UMM professionals have helped companies to set up accounting programs and develop marketing studies and strategies.

In addition to promoting new business ventures, the SBCO also tries to foster the stability of existing farms and businesses, and to assist small rural manufacturers seeking marketing and technical advice.

For several years, the state of Minnesota has maintained a fund for rural projects and development initiatives. In 1985, the governor's office provided funds to UMM to stimulate business development in the region and to strengthen ties between the University and the business community. UMM was chosen because of its work on the "Rural Women Mean Business" program that helped women establish more than 22 small businesses in the local community, ranging from a bed and breakfast inn to a clothing consignment operation that recently sold for $50,000. The SBCO grew out of that program and now services anyone with business-oriented needs.

The SBCO received approximately $40,000 from the state and almost $10,000 in local resources to fund the first two years of the program. Since March 1987, the SBCO has been funded by the West Central Minnesota Initiative Fund, one of six initiative funds administered by the McKnight Foundation.

UMM has established outreach offices in communities within 40 miles of the campus and has used a newsletter and local advertisements to alert residents to SBCO's services. Over 83 percent of the 250 clients served during the program's first two years have reported satisfaction with the assistance they received from the SBCO. The new relationship with the Initiative Fund has expanded the visibility of the SBCO, and with the increase in community development projects in Minnesota, the SBCO now offers its business-related services to an expanding pool of potential clients.

The North Dakota State University Farm Wives and Families in Distress Program

The economic woes of the farmer can have a serious effect on the farm family's emotional well-being. For the typical farmer, who often represents just the most recent in several generations of families tied to the land by tradition and economic necessity, property is the one constant in the struggle to maintain a successful farm. If that land is lost, bitterness and confusion abound. Unable to direct

frustration toward the unknown agent that has removed land and livelihood, the displaced farmer often vents hostilities on the rest of the family.

Few of the farm families facing financial difficulties have taken advantage of retraining opportunities. Many farmers lack the self-confidence to take retraining courses and see the world outside the farm as extremely unfriendly. Complicating the matter is the fact that many farmers view the education community as an elitist institution.

The North Dakota State University (NDSU) Division of Continuing Studies' "Farm Wives and Families in Distress" program attempts to reach those in rural communities who will not seek help on their own. Sponsored by NDSU's Department of Child Development and Family Services, and developed by Harriet Light, the program is designed to help farm families see change in a more positive context. It is not intended to remove people from the farm, but rather to demonstrate that the farmers' practical skills give them many career options other than farming.

Program staff have traveled to rural communities for three years delivering the program to groups ranging in size from 35 to 200 individuals. "Farm Wives and Families" operates on a three-step procedure: 1) develop an awareness of the change in the farmers' lives and its effect on the families; 2) learn to work with the change in order that anger and guilt do not harm family relationships; and 3) increase the participant's confidence and work with him or her to choose a pattern of action that best utilizes the resources available to the particular farm family.

The program has several success stories. One woman now employs her farming skills to manage NDSU's agricultural test plots program. Another woman, whose family had gone through difficult bankruptcy proceedings, has put her cooking skills to work for a local catering service.

To overcome the farmers' distrust of educators, the staff was chosen from the local farm and ranch community so that program participants could relate to the instructors. To further avoid alienation, the program is tailored to the needs and sensitivities of the individual community. In addition, food is always served at the meetings as an ice-breaker—an important practice in a rural community. Finally, sessions are arranged around planting and harvesting times so that the men of the community may participate in the program.

"Farm Wives and Families" costs approximately $100,000 per year to operate. Most of the funding comes from personal contributions and community funds, although some corporate dollars have been donated. Evaluations of the program and its personal approach have been positive, and the project will expand on a year-to-year basis to include ranchers and small businesses.

The University of Kansas "Choices for Kansas Communities" Conferences

In the past, Kansas has been vulnerable to droughts, blights, and other quirks of nature. Now the people of Kansas face an agrarian downslide that has stultified a substantial portion of their economy.

In spring 1985, University of Kansas (UK) officials met with Congressman Pat Roberts (R-KS) and others to devise a plan to confront the state's economic woes. A 25-member blue ribbon advisory committee was established to explore avenues through which to address Kansas's economic development, infrastructure, and quality of life. The committee planned a conference to analyze these issues and their impact on the state's future.

In preparation for the conference, KU's Division of Continuing Education published a source book in March 1986 titled, *Kansas Communities: Changes, Challenges, Choices*. The book outlined economic and demographic problems within the state, as well as the future potential for growth, development, and change.

The conference, "Choices for Kansas Communities," was held in Salina in May 1986. More than 100 people attended the two-day program, which explored pertinent issues and divided participants into groups to formulate suggestions for

action. The conference was so well-received that additional programs were held in five other Kansas communities.

Several initiatives have developed as a result of the conferences: *Kansas Works!*, a monthly newspaper, circulated to 8,000 Kansans with important roles in economic development state-wide, is being published to increase awareness of the state's economic troubles and strategies for confronting them; a monograph titled "Rural Kansas in Transition: The Self-Help Strategies of Atwood and Luray," is available to those looking for potential economic development strategies to help improve their towns' economic situations; and a product development fair is being planned for Cloud County Community College.

UK funded more than 90 percent of the conferences' costs and has received a Gold Medal Award for the conference series from the Council for the Advancement and Support of Education (CASE). The KU Division of Continuing Education will offer similar programs in spring 1987. In addition, leadership training and regional cooperation and planning initiatives have increased at KU and throughout the state.

The Kansas State University Science Honors Program

Many sociologists believe that one solution to the rural dilemma lies in providing improved educational opportunities to rural residents, and so enabling them to explore career options beyond the farm. But the nation's highly competitive college and university admissions requirements may preclude rural students from pursuing such opportunities, for they often lack their urban peers' academic background.

The Kansas State University (KSU) Science Honors Program is trying to help rural students in Kansas open the doors to America's more competitive higher education institutions. Since its inception in 1974, the program has sought to augment the scientific background of rural students by transmitting high quality science courses through the Kansas Regents Network (TELENET), an audio network that augments its programs with video cassette presentations.

KSU employs its faculty and eminent scientists from industry, government, and other universities to deliver the weekly, two-hour sessions that run from September through November. In 1986, TELENET delivered the Science Honors Program to nearly 90 high school juniors and seniors at 37 TELENET centers and more than a dozen high schools across Kansas. TELENET is fully interactive, so students are able to ask questions of the instructor based on the lecture and a pre-broadcast materials packet.

KSU attracts rural high schools to the Science Honors Program through comprehensive mailings to science teachers and school administrators. Since KSU underwrites most of the program costs, there is considerable incentive for high schools to carry the program. In addition, the University has offered special workshops to rural high school science teachers which prepare them to teach advanced science curricula, especially with respect to the Science Honors Program.

Besides offering students the high quality science programs necessary to compete in post-secondary institutions, the Science Honors Program offers rural students a chance to get a foothold at a major university. In addition to completing the course's reading requirements, students must write a final paper which is graded by KSU faculty members. Students can receive two college credits toward a degree at KSU for successful completion of the course. The credit incentive is a good recruitment tactic for KSU, and it offers rural students a chance to have their written work evaluated on a collegiate level.

The program has been well received in rural high schools across Kansas, and teachers report increased student interest in science curricula. TELENET has also transmitted the program to rural high schools in Alaska and Montana, and may expand to other regions in the next few years. KSU has employed TELENET for a variety of subjects ranging from political science to humanities, and will look to offer a greater selection in the future.

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